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REC'D 28 JUN 2004

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**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11031P3 WO/RH	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/03466	International filing date (day/month/year) 07.08.2003	Priority date (day/month/year) 22.08.2002
International Patent Classification (IPC) or both national classification and IPC C11D17/00		
Applicant RECKITT BENCKISER INC		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  26.01.2004	Date of completion of this report  28.06.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Richards, M  Telephone No. +31 70 340-4267 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB 03/03466

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-25 as originally filed

**Claims, Numbers**

1-9 filed with telefax on 11.06.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB 03/03466

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-9
	No: Claims	
Inventive step (IS)	Yes: Claims	1-9
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB 03/03466

**Item V**

Reference is made to the following documents:

D1: WO-A-0024852

D2: WO-A-9947635

**Novelty** (Article 33(2) PCT)

The subject matter of claims 1 - 9 is novel.

D1, see claims 1 - 26 and examples IX, XI, XIII - XV, discloses liquid cleaning compositions which on standing form two aqueous phases. Example XIII comprises sodium carbonate (electrolyte), 2.8wt% didecyldimethylammonium chloride (germicide), 2wt% nonionic surfactant, 0.9wt% amphoteric surfactant, further additives including esterquats (cationic having germicidal properties) and water. D1 does not disclose a composition comprising an amphoteric surfactant according to claim 1, and it follows that there is also no disclosure of the subject matter of the dependent claims.

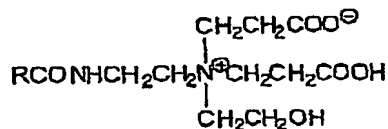
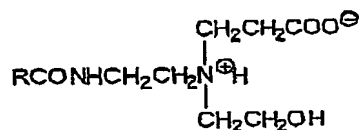
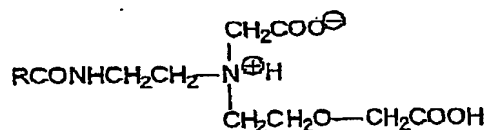
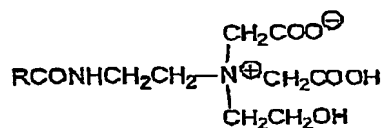
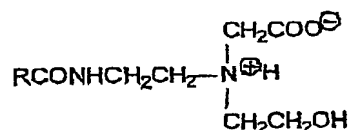
**Inventivity** (Article 33(3) PCT)

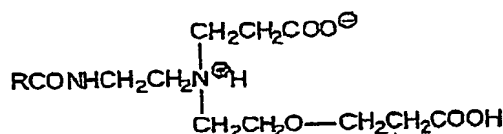
The present application addresses the problem of finding an aqueous based cleaning and/or disinfecting composition which is effective against both inorganic and organic stains or soils and which has a reduced potential for ocuar irritation. The solution to the problem is a multi-phase composition according to claim 1.

None of the cited documents disclose or suggest such a composition for solving said problem. Inventivity of claims 1 - 9 is thus acknowledged.

## Claims:

1. A composition which separates into at least two aqueous phases upon standing comprising:
- (a) 0.01 – 10%wt. of at least one cationic surfactant having germicidal properties;
  - (b) 0.1 – 10%wt. of at least one nonionic surfactant;
  - (c) 0.1 – 10%wt. at least one component having irritation mitigating properties
- selected from one or more amphoteric surfactant selected from the group of compounds having the formulas





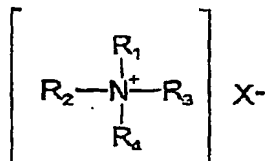
wherein R is C<sub>8</sub> to C<sub>24</sub> alkyl, optionally with one or more anionic surfactants;

(d) at least one electrolyte;

(e) optionally, one or more constituents for improving the aesthetic or functional features of the inventive compositions;  
and the remainder water.

2. The composition according to claim 1 wherein in excess of 50%wt. of the (a) at least one cationic surfactant having germicidal properties is found in the upper aqueous phase.
3. The composition according to claim 1 wherein in excess of 50%wt. of the (c) at least one component having irritation mitigating properties selected from the group of amphoteric surfactant, anionic surfactant, and mixtures thereof is found in the upper aqueous phase.
4. The composition according to claim 1 wherein the amount of (d) at least one electrolyte is present in an amount of from about 0.01 to about 5.0wt%.
5. The composition according to claim 1 wherein the (c) at least one component having irritation mitigating properties comprises an anionic surfactant.
6. The composition according to claim 5 wherein the anionic surfactant is selected from: sodium alkane sulfonate, sodium xylene sulfonate, alkyl benzene sulfonate, salts thereof, and mixtures thereof.

7. The composition according to claim 1 wherein the (a) at least one cationic surfactants having germicidal properties has the formula



where at least one of  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  is an alkyl, aryl or alkylaryl substituent of from 6 to 26 carbon atoms, X is an anion and the entire cation portion of the molecule has a molecular weight of at least 165.

8. The composition according to claim 1 wherein (a) comprises two cationic surfactants having germicidal properties.
9. The composition according to claim 1 containing (e) at least one constituent for improving the aesthetic or functional features of the inventive compositions selected from coloring agents, fragrances and fragrance solubilizers, viscosity modifying agents, other surfactants, pH adjusting agents and pH buffers including organic and inorganic salts, optical brighteners, opacifying agents, hydrotropes, antifoaming agents, enzymes, anti-spotting agents, anti-oxidants, preservatives, and anti-corrosion agents.